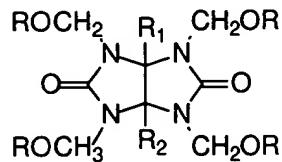


Claims:

What are claimed are:

1. A method of forming a pattern of photoresist which comprises: providing on a substrate an uncured film comprising: a film forming, soluble aliphatic hydroxy functional dendrimer of generation 2 (at least 8 hydroxyl groupos) r; a glycoluril derivative; a photoacid generator; an organic solvent; imagewise exposing said film to E-Beam energy in a pattern to thereby cause generation of acid catalyst in said pattern; baking of said exposed film at 90 -130 C for 1-2 minutes; and developing said photoresist in an organic solvent.e solution.
2. A method according to claim 1 wherein the exposure is E-beam energy of less than 1 milli coulombwavelength.
3. The method according to claim 1 wherein said glycoluril derivative has general formula:



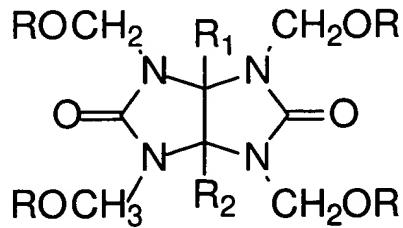
Glycouril derivatives

13. A composition according to claim 13 wherein said photoacid generator is selected from onium salts of group IV elements.
14. A composition according to claim 13 wherein said photoacid generator is selected from onium salts of Group VIa elements.
15. A composition according to claim 13 wherein said phenolic resin or polymer, said glycoluril derivative, said photoacid generator and said solvent form an admixture comprising from about 40% to about 80% of said dendrimer resin or polymer, from about 5% to about 25% of said glycoluril derivative and from about 2.0% to about 20% of said photoacid generator.
16. A method of forming a patterned material structure on a substrate, said material being selected from the group consisting of semiconductors, ceramics, organics and metals, said method comprising:
- (A) providing a substrate with a layer of said material,
 - (B) applying a resist composition to said substrate to form a resist layer over said material layer, said resist composition comprising: an admixture of a aliphatic hydroxyl containing dendrimer with at least 8 hydroxyl groups per molecule; a glycoluril derivative; a photoacid generator; an organic solvent and an organic base;

- (C) patternwise exposing said substrate to radiation whereby acid is generated by said radiation-sensitive acid generator in exposed regions of said resist layer by said radiation,
- (D) contacting said substrate with an aqueous alkaline developer solution, whereby said exposed regions of said resist layer are selectively dissolved by said developer solution to reveal a patterned resist structure, and
- (E) transferring resist structure pattern to said material layer, by etching into said material layer through spaces in said resist structure pattern.

8

17. The method according to claim 16 wherein said glycoluril derivative has general formula:



in which R₁ and R₂ can be selected individually from the group consisting of alkyls having 1-6 carbons, alkenyls, alkoxy.

9

18. A method according to claim 16 wherein said photoacid generator is selected from onium salts of group IV elements.

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19. A method according to claim 18 wherein said photoacid generator is selected from onium ^{salt} salts of Group VIa elements.

B

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20. A method according to claim 16 wherein said photoacid generator is selected from sulfonate of N-hydroxyimides.

12

21. A method according to claim 16 wherein the photoacid generator is the hexafluoroantimonate hexafluoroantiminate of a triaryl sulfonium.

B

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22. A method according to claim 16 wherein said aliphatic hydroxyl containing dendrimer, said glycoluril derivative said photoacid generator and said solvent form an admixture comprising:

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from about 90% to about 60% of said dendrimer, from about 5% to about 20% of said glycoluril derivative, and from about 2% to about 20% of said photoacid generator.

in which R₁ and R₂ can be selected individually from the group consisting of alkyls having 1-6 carbons, alkenyls, alkoxy

4. A method according to claim 1 wherein said photoacid generator is selected from onium salts of group IV elements.

5. A method according to claim 1 wherein said photoacid generator is selected from onium salts of Group VIa elements.

6. A method according to claim 1 wherein said photoacid generator is selected from sulfonate of N-hydroxyimides.

7. A method according to claim 1 wherein the photoacid generator is the hexafluoroantimiate of a triaryl sulfonium.

8. A method according to claim 1 wherein said aliphatic hydroxyl containing dendrimer, said glycoluril derivative said photoacid generator and said solvent form an admixture comprising:

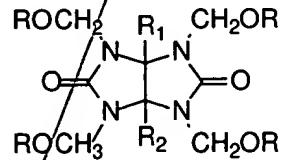
from about 90% to about 60% of said dendrimer, from about 5% to about 20% of said glycoluril derivative, and from about 2% to about 20% of said photoacid generator.

9. A method of forming a pattern of photoresist which comprises: a film of an admixture comprising: a dendrimer; a glycoluril derivative; a photoacid generator; an organic solvent; an organic base; imagewise exposing said film to E-beam energy of less than 1 millicoulomb in a pattern to thereby cause generation of acid catalyst in said pattern; baking of said exposed film; and developing said photoresist.

10. A composition of matter comprising: an admixture of a aliphatic hydroxyl containing dendrimer with at least 8 hydroxyl groups per molecule; a glycoluril derivative; a photoacid generator; an organic solvent; an organic base.

11. A composition according to claim 13 wherein said phenolic resin is an aliphatic hydroxyl containing dendrimer with at least 8 hydroxyl groups per molecule.

12. A composition according to claim 13 wherein said glycoluril derivative has general formula:



in which R₁ and R₂ can be selected individually from the group consisting of alkys having 1-6 carbons, alkenyls, alkoxy's.